Performance:

Absolute state-of-the art system. Hands down.

Optical Design:

Advanced Coma-Free.

Strength:

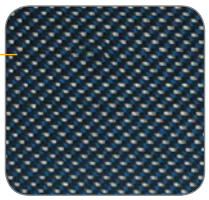
Unparalleled crisp, flatter field of view. Observatory quality optics. Remote access via web or network. Fully-integrated turn-key system.

Buzz:

Sky & Telescope calls the 20" MAX-ACF "the most electronically sophisticated mass-market telescope ever made."

OBSERVATORY CLASS. For the pro in all of us.

20" MAX-ACF™
ADVANCED COMA-FREE



Carbon fiber tube

"The 20" MAX-ACF does indeed perform like a Ritchey-Chrétien. The difference between the off-axis images (compared to a Schmidt-Cassegrain) was dramatic to say the least."

— Sky & Telescope magazine

"Out of the box the scope had the most responsive declination guiding that I have ever experienced with a mass-market telescope."

— Sky & Telescope magazine

"The scope is a quantum leap above conventional Schmidt-Cassegrains. It approaches the performance of telescopes that cost five or six times as much."

— Jason Ware, Astrophotographer

Imagine you're a seasoned astrophotographer saving up for the fast f-ratio, wide-field, coma-free, custom telescope of a lifetime. One that can handle the largest CCD chips. One with state-of-the-art optics and mechanics. One that is praised as "approaching perfection" by industry critics and astronomers alike. Suddenly you find out your telescope is available for one-fifth of what you thought—and you won't have to wait six months for it to be built. What would you do? You'd buy one.

Sky & Telescope Magazine says the 20" MAX-ACF "fills a significant gap that existed between similar aperture Schmidt-Cassegrains and custom-made Ritchey-Chrétien reflectors." Until now, the only systems comparable to the 20" MAX-ACF were custom-made and had to be pieced together with components from different vendors. To deliver a comparable research-grade system, fully integrated, out-of-the-box, would be a grand achievement at half the price. At less than one-third of the price, it's a miracle. That explains why the 20" MAX-ACF won a 2005 "Best of What's New Award" from Popular Science Magazine.

Sky & Telescope's glowing review ended with this thought: "Some hobbyists mistakenly believe that a product review without equal doses of praise and criticism is biased or unbalanced. Truth is, I can't find many negative things to say about the 20" MAX-ACF...the 20" MAX-ACF is a winner."

Patent-Pending (f/8) Advanced Coma-Free optics. Astrophotographer Jason Ware says "the 20" MAX-ACF is a huge jump [over the Schmidt-Cassegrain] as far as sharpness of image, flatness of field, and color." The fast (f/8) Advanced Coma-Free design produces a large, coma-free field of view from edge-to-edge. The corrector plate reduces astigmatism inherent in the traditional RC design. **A.**

Legendary Diffraction-limited optics. Only Meade individually figures their Water White glass corrector lenses and Pyrex® primary and secondary mirrors in our own plant in Mexico for observatory-class light transmission, temperature stability, smoothness and image correction. Advanced Coma-Free Optics are Meade's very best. And our optics lead the industry. **B.**

Laser-Aligned, Fixed Oversized Primary Mirror. Laser aligned to the true optical path, then bonded in place, the mirror is fixed but literally floats on neoprene rubber seals. This results in zero stress to the glass and no distortion to the optics. **C.**

Electronic Front Focusing System. Patent-pending digital system electronically moves the entire front cell (corrector lens and secondary) in precise increments as fine as 1/1000 of a millimeter. A fixed primary means no image shift or focus backlash. Sky & Telescope says, "I've never used an electric focusing system that I liked more." **D.**

Nine Focus Position Presets. Customize up to nine perfect focus settings for moving from eyepiece to eyepiece, camera to camera, or observer to observer. Recall preset positions with the touch of a few buttons. **E.**

Electronic Collimation. The very best astrophotographs come from well-collimated (aligned) optics. The 20" MAX-ACF's unique collimation process is so easy that you can collimate in just seconds with simple up-down/left-right buttons on the AutoStar® II controller. **F.**

Built-In Anti-Dew Heater. A unique heating coil is affixed to the outside edge of the corrector lens. Temperature is adjusted via the AutoStar II controller. Uses a fraction of the energy of aftermarket anti-dew heaters. Sky & Telescope says it "worked exceptionally well." **G.**

Sony® GPS Receiver Sensor. Automatically inputs exact time, date, and geographical location to help quickly and precisely align your telescope. Gets a satellite fix in seconds despite obstructions like trees or buildings. **H.**

I. **AutoAlign™.** Automatically aligns your scope to the night sky. Sky & Telescope says, "Working with the 20" MAX-ACF was a very pleasant out-of-the-box experience. In a perfect world all products would be like this..."

J. **Smart Drive™.** Provides Permanent Periodic Error Correction (PPEC) on both axes over the course of one or more training periods, thereby minimizing guiding corrections during long-exposure astrophotography.

K. **Smart Mount™.** Constantly refines pointing accuracy each time an object is centered and updated. Works in equatorial or altazimuth alignment. An indispensable feature for permanent installations.

L. **AutoStar® II controller.** AutoStar on steroids. Features "Hot Keys" for quick access to over 180,000 celestial objects. Operate 20" MAX-ACF features like Electronic Focusing and Collimation, Anti-Dew Heater, Smart Drive and Smart Mount. Download software updates, guided tours, and timely objects like comets and new discoveries free at Meade.com.

M. **MAXMOUNT Tripod.**

N. **Computer-Optimized Baffling.** Baffles on the primary and secondary mirror are computer-optimized to provide high contrast images by preventing stray light rays from reaching the focal plane.

O. **Carbon Fiber and Kevlar Optical Tube.** This uniquely strong, yet light-weight material has thermal characteristics ideal for astrophotography. The tube resists expansion and contraction as temperature rises and falls. So 20" MAX-ACF optics stay in focus even during the longest exposures.

P. **UHTC.™** Our exotic optical coatings optimize light transmission. Image brightness is increased by 15% over standard coatings. It's like adding up to an extra inch of aperture (depending on scope size). Objects appear dramatically brighter.

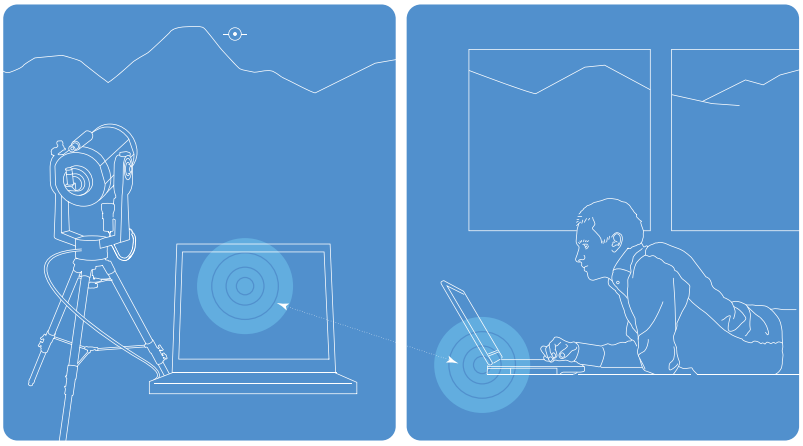
Q. **Multi-Port Control Panels.** The first telescope to feature a powered, three port high speed USB 2.0 hub. Separate control panels are positioned on both the drive base and rear cell of the OTA, so you can plug equipment like the AutoStar® II and the Deep Sky Imager™ directly into the OTA control panel to avoid cord wrap and tangle.

R. **Series 5000™ 2" Ultra Wide Angle Eyepiece.** 24mm eyepiece gives you the ultimate in eyepiece design. It delivers extremely high-resolution, contrast and sharpness all the way across an astounding 82° apparent field of view. Several different types of exotic glass are combined to give you the highest possible level of optical performance.

S. **AutoStar Suite™ Software.** Easy-to-use planetarium software allows you to see what's in the sky tonight. Plan observing sessions, print star charts, take astrophotographs or control your telescope from your PC (windows only).

T. **Remote Control Access.** The Enhanced 20" MAX-ACF AutoStar Suite lets you come in from the cold and operate your telescope. You can set-up, control, and image like the pros from the comfort of your home office or even across country via the web.

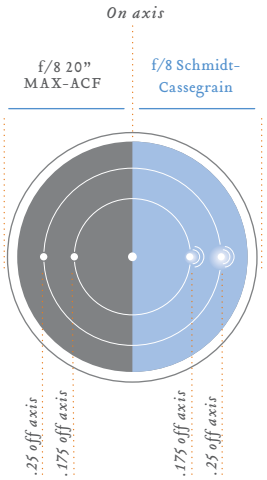
A



20” MAX-ACF™ highlights

A. *The remote control observatory. Control your telescope from the comfort of your home, office, or even out-of-town with Meade’s completely integrated AutoStar® II and 20” MAX-ACF software systems. Access the computer that controls your telescope via network or Web access. Work like the pros, imaging whenever the weather, your schedule, and the universe align. With a 20” MAX-ACF, you have your own remotely controlled observatory. Just set-up, connect, control, and image. AutoStar II makes it easy.*

B



B. *Perfect star images edge-to-edge. This professional level of off-axis performance was previously unavailable without spending more than three times the cost of an 20” MAX-ACF.*

A success story fresh off the drawing board.

On March 26, 2002, Meade engineers set out to design a telescope with the most sophisticated optics, mechanics and electronics ever manufactured. If successful, the new scope would make observatory-level performance accessible to any serious astronomer or astrophotographer who desired it.

The 2006 20" MAX-ACF review in Sky & Telescope magazine said, "Meade claimed that one of its goals in developing the 20" MAX-ACF was to address various problems... that had dogged Schmidt-Cassegrains for more than 30 years. My feeling is that the company really has succeeded. Even when you judge it by the demanding criteria imposed by long-exposure imaging, the 20" MAX-ACF is a winner."

Thinking beyond the Schmidt-Cassegrain.

Like NASA's Hubble Space Telescope, almost every professional observatory reflector in the world today uses a Coma-Free optical system. So it's no surprise that Meade engineers chose their Advanced Coma-Free design as the ideal optical configuration. This design improves on the traditional Ritchey-Chrétien design by adding a corrector lens to reduce astigmatism and diffraction spikes. Then Meade engineers designed the 20" MAX-ACF's mechanical and electronic systems from a clean slate (and thousands of amateur astronomer suggestions) to ensure it would become the most capable telescope in company history.

For serious research or fast, flatter, wide-field fun.

Recognizing the growing popularity of astrophotography, Meade chose a fast (f/8) focal ratio for the 20" MAX-ACF. This offers astrophotographers optimal speed in combination with a large, coma-free field of view (from edge-to-edge). Despite all of its visual and technical prowess, a 20" MAX-ACF is just plain fun. Sky & Telescope says, "One aspect of the 20" MAX-ACF that repeatedly amazed me [was] ease of use. Working with the 20" MAX-ACF was a very pleasant out-of-the box experience. In a perfect world all products would be like this..."

Observatory-precise pointing and tracking.

The 20" MAX-ACF's mechanical systems are complex. But what really matters is results. Sky & Telescope described a first experience autoguiding the 20" MAX-ACF with a large format CCD camera. After a few initial set-up procedures... "the numbers looked good, so I tried a 5-minute autoguiding exposure. The image was perfect... I went on to make 15 more 5-minute exposures that night, and every one was a keeper!"

We thought of everything. Then made it electronic.

From electronic focusing and collimation, to electronic drive-training and sensor calibration, from electronic temperature controls to electronic High-Precision Pointing (HPP), the 20" MAX-ACF can help you do anything from imaging Saturn to imaging an 18th magnitude galaxy too dim to visually confirm before you take the shot.

Adding on to your 20" MAX-ACF.

Your 20" MAX-ACF is absolutely the telescope of a lifetime. Meade features a complete line of additional accessories that will help your scope grow with you for years to come.

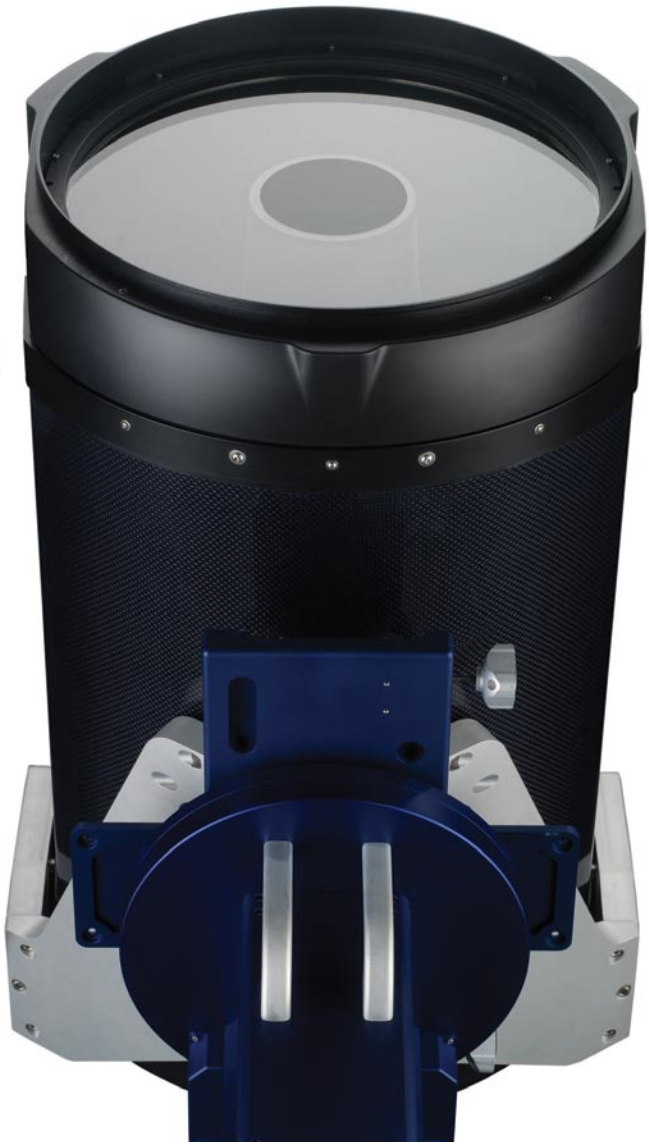
20" MAX-ACF 20" MAX MOUNT On Tripod: #2008-MAX-01

- 20" (508mm) aperture
- Advanced Coma-Free
- f/8 focal ratio (4046mm)
- AutoStar II (180,000 object database)
- 16-Channel Sony® GPS Receiver
- Ultra-Wide Series 5000™ 24mm eyepiece
- UHTC Optical Coatings included
- 670 lbs net weight (mount and tripod)
- 12 vdc, 5 amp power supply required
- Slew Speed: .01 sidereal to 2°/sec in 115 increments
- Guide Speeds: 0x and 2x

20" on MAX w/AZ Pier: #2008-MAX-02

20" MAX-ACF
16" 20"
MAX MOUNT

For a full list of specifications go to www.meade.com. Specifications are subject to change without notice.



20" MAX-